

# A rare case of unusually large pseudocyst of pancreas treated unconventionally

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## ABSTRACT

The pancreatic pseudocyst is a collection of amylase-rich pancreatic secretions. It is the most prevalent pancreatic cystic lesion. Given that granulation tissue, not epithelium, lines the cyst, it is called a false cyst. The smaller sac is the most typical site for pseudocysts to form in both acute and chronic pancreatitis. In our case, the pseudocyst implausibly expanded to the left iliac fossa. Herein, we report a 32-year-old male patient with a history of chronic alcohol misuse dating back seven years. The pseudocyst measured 20 cm x 8.3 cm x 6.5 cm on CT imaging. The management of choice was surgical, where cystojejunostomy and jejunojejunostomy were performed to treat the patient.

**Keywords:** Pancreatic pseudocyst, cystojejunostomy, jejunojejunostomy, chronic pseudocyst.

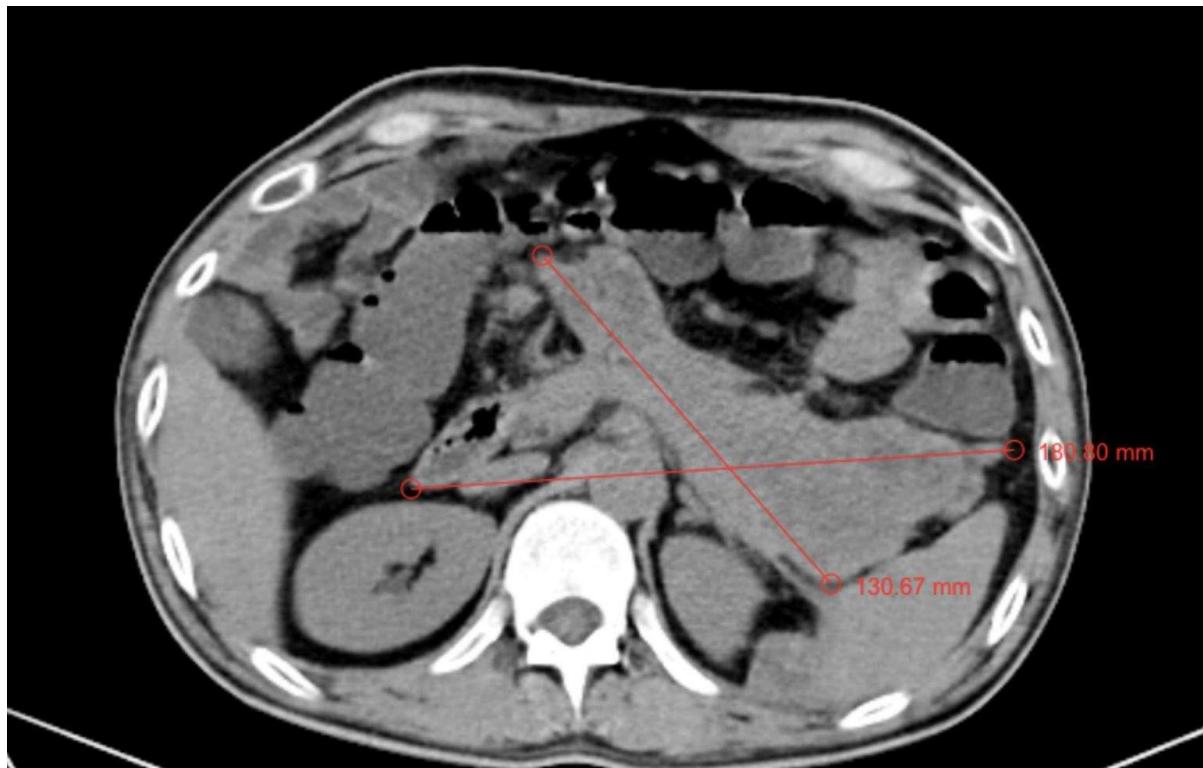
## 1. INTRODUCTION

A collection of fluids high in pancreatic enzymes and amylase is known as a pancreatic pseudocyst. According to reports, the pseudocyst appears after acute or chronic pancreatitis episodes. It occurs between five and fifteen percent of the time (Cui et al., 2014). Additionally, pancreatic damage may be the cause. A pancreatic pseudocyst can also be brought on by chronic pancreatitis brought on by excessive alcohol consumption (Alhassan et al., 2017). The currently available research reveals that very few notably big pancreatic pseudocysts have been reported. Here, we discuss a case of a massive pseudocyst of pancreas in a patient with chronic alcoholism (Aghdassi et al., 2006).

## 2. CASE PRESENTATION

A 32-year-old male with a history of chronic alcoholism for seven years presented with pain in the abdomen in the epigastric region, which was insidious in onset, gradually progressive in nature, dull aching in character aggravated after meals and relieved on the consumption of analgesics, pain radiating to the back and was associated with intermittent high-grade fever

three months ago. All routine laboratory investigations such as full blood count, kidney function test, urine routine, random blood sugar, prothrombin time, liver function test and serum electrolytes were done and were normal, especially the serum amylase levels (4135 U/L) suggestive of pancreatic pathologies. A plain computed tomography scan of the abdomen and pelvis was done, which was suggestive of necrotising pancreatitis and collection of fluid around the tail of the pancreas, peri splenic region paracolic gutter and focal peritonitis was revealed of size  $20 \times 8.3 \times 6.5$  cm (20 cm longitudinal diameter seen in coronal sections of computed tomography) which extended to the left iliac fossa (Figure 1).



**Figure 1** Non contrast computed tomography transverse view abdomen depicting pseudocyst of pancreas with wall of necrosis in its transverse diameter 18.080 cm.

MRCP study was done and was suggestive of pancreatitis with the wall of necrosis. The patient was previously conservatively managed for the same complaints three months ago, but he continued to deteriorate despite the treatment and needed urgent surgical treatment. Later, after confirming the diagnosis of acute necrotising pancreatitis with a wall of necrosis with pseudocyst of the pancreas was confirmed via an endoscopy. The patient then underwent cystojejunostomy and jejunojjunostomy. A gastrojejunostomy was not performed due to impending complications from wall of necrosis. Instead, a cystojejunostomy was performed. A vertical midline incision was made from the supra umbilical region to the pubic symphysis deep to the peritoneal, where the pseudocyst was localised along the tail of the pancreas and confirmed via intraoperative ultrasonography. With a 4 cm incision over the cyst, the cyst contents were drained and the margins were refreshed by debridement. A proximal segment of the jejunum was anastomosed with an opening along the dependent part of the cyst. The distal segment of the jejunum was anastomosed with the proximal segment. The Peritoneal and rectum were closed using prolene on loop sutures in layers. Further, Figure 2 shows intraoperative images of side-to-side jejunojjunostomy.

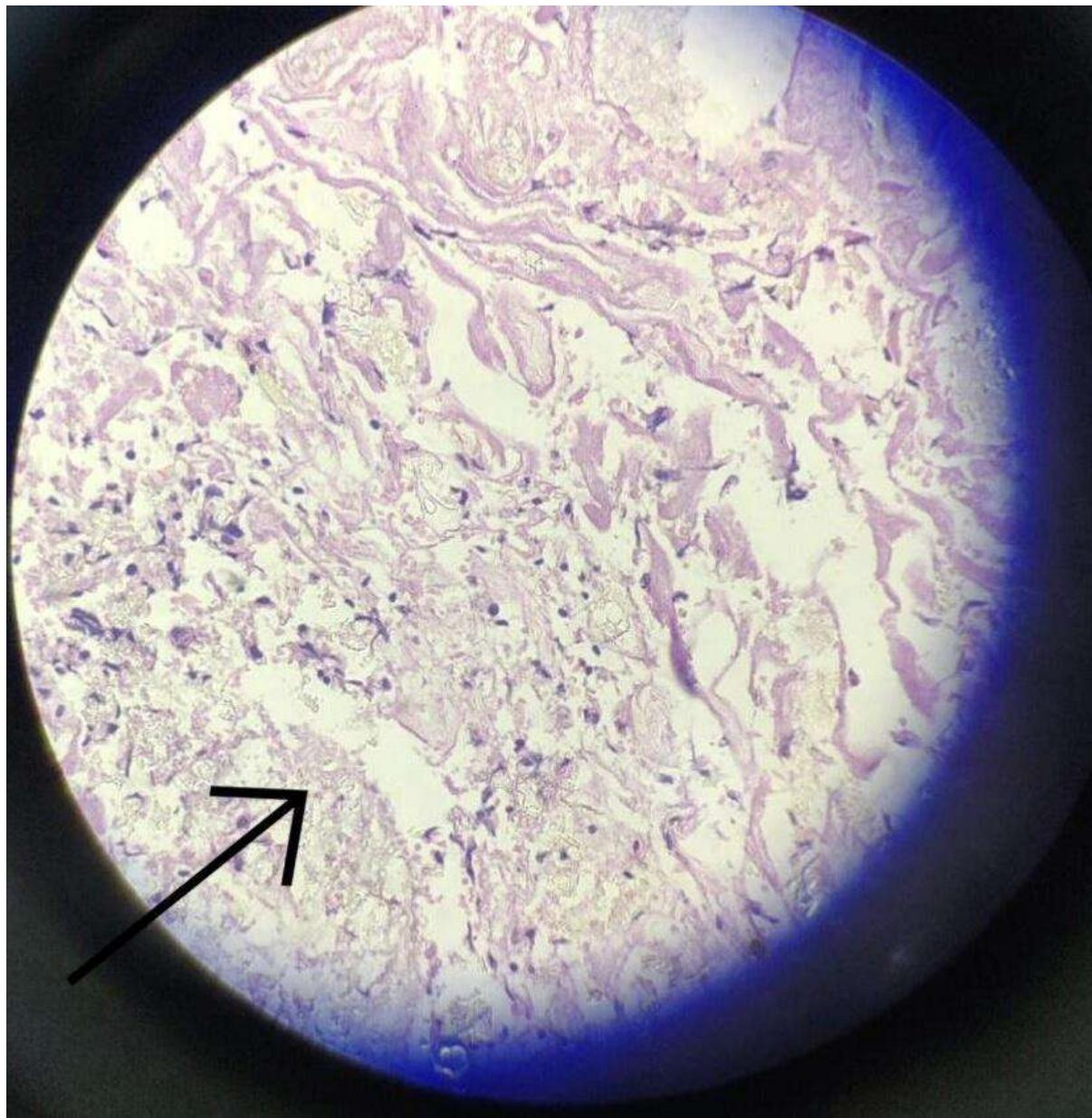


**Figure 2** Intraoperative image showing side-to-side jejunostomy after drainage of the pseudocyst.

One unit of PRC (packed red cells) was transfused during the operation.

The patient was shifted to a post-op room and the surgery was uneventful.

The contents of the cyst and the cyst were sent for histopathology (Figure 3).



**Figure 3** Depicts necrosis with inflammatory cells in histopathology slide of pseudocyst of pancreas.

#### Follow up

The patient showed no complications, such as anastomosis leakage or surgical site infection, during the post-operative surgical stay and in consecutive follow-up visits. A postoperative ultrasonography scan was done, which revealed a normal appearance of the liver, gallbladder, spleen, kidneys, prostate and urinary bladder. No local lesions or obvious masses were noted in the pelvis. No ascites was appreciated, along with any evidence of collection in the abdomen. The pancreas appeared slightly bulky with heterogeneous echo texture and showed no obvious collection.

He has made an uneventful recovery while showing adequate weight gain and an appearance of a moderate build. He is on regular external pancreatic enzymes and total alcohol abstinence.

### 3. DISCUSSION

The pseudocyst of the pancreas is defined as an "encapsulated collection of fluid with a well-defined inflammatory wall outside the pancreatic, typically with minimum or no necrosis," as defined in the Atlanta classification of acute pancreatitis. This criterion was developed to distinguish between an acute peripancreatic fluid accumulation and a pseudocyst. This fluid accumulation may become apparent within the first few weeks after acute pancreatitis begins (Banks et al., 2013).

When the size is higher than 10 cm, the phrase "giant pancreatic pseudocyst" is commonly used (Shah et al., 2012). There are very few records of pseudocysts larger than 20 cm. Bozeman identified a pseudocyst weighing 20.5 pounds and consisting of around 9.5 liters of fluid. In our case, we report an unusually large pseudocyst measuring 20x8.3x6.5 cm containing approximately 4000 ml of fluid rich in amylase.

Both pancreatic pseudocysts and true cysts are fluid-filled masses. However, Pseudocyst is different from a true cyst as the pseudocyst is not lined by epithelial cells. Also, the true cyst is an enclosed structure. This distinction is crucial for diagnosis and management. Pancreatic pseudocysts are rarely cancerous. Pancreatic pseudocysts generally follow acute or chronic pancreatitis, although formation after acute pancreatitis is less common than after chronic pancreatitis. Chronic alcohol abuse that leads to chronic pancreatitis is a leading cause.

The alcohol-induced pancreatic pseudocyst accounts for 59-78 percent of all pseudocysts (Pitchumoni and Agarwal, 1999). The two most prevalent causes of pancreatitis are gallstones and excessive drinking of alcohol. Other factors contributing to this condition include traumatic pancreatic injury, pancreatitis, pancreatic tumours, increased serum calcium and cholesterol levels, medication-induced pancreatic damage, autoimmune diseases and genetic factors that can damage the pancreas, such as cystic fibrosis. An unusual development in one case report describes an infected pancreatic, hepatic subcapsular pseudocyst that led to septic shock after ERCP (Endoscopic retrograde cholangiopancreatography). It draws attention to an uncommon, septic ERCP complication and an unusual presentation of pancreatic pseudocyst. Initial pancreatic pseudocyst symptoms can range from asymptomatic to generalised, including anorexia, vomiting, nausea and early satiety. Along with the previously described symptoms, other very serious problems, such as compression of surrounding organs like the stomach, intestines, major arteries and pancreatic duct, may also take place. It may also result in fluid accumulation, which could bring on more complications like haemorrhage and fistula formation.

Depending on the clinical presentation, management techniques may include surgical procedures, endoscopic drainage, percutaneous drainage and expectant management. Conservative therapy, including bowel rest and parenteral nutrition, increases the possibility of spontaneous regression (Shah et al., 2012). But numerous patients with pancreatic pseudocysts require treatment. Surgical intervention is necessary when difficulties arise or the cyst neoplasm is suspected. Six weeks of observation are often indicated after acute pancreatitis to allow for either pseudocyst wall growth or spontaneous remission; the optimal time for surgical intervention needs to be determined (Warshaw and Rattner, 1985). The management of pseudocyst is either by external drainage with a pigtail catheter and stenting or by internal drainage with surgical procedures like laparoscopic or open cystogastrostomy and cystojejunostomy. The procedures mentioned above are considered the gold standard method of surgical treatment in cases of pseudocyst of the pancreas. Still, in our case, the management of the patient was done by cystojejunostomy and jeunojejunostomy due to an extensive wall of necrosis.

#### 4. CONCLUSION

Acute or chronic pancreatitis can result in the pancreatic pseudocyst. Local gastrointestinal symptoms to systemic consequences are possible with a pseudocyst. Until recently, the main treatment options for pseudocysts were external and internal surgical drainage. External drainage includes the use of percutaneous catheter drainage and endoscopic drainage under ultrasonographic imaging. It is necessary to evaluate the situation with examinations ranging from haematological to radiographic to deliberate on the course of treatment. Although some minor pseudocysts have been documented to dissipate spontaneously, most of them persist and require additional exploration.

In this instance, we describe a patient who successfully underwent intraoperative ultrasonography-guided internal cyst drainage by cystojejunostomy and jeunojejunostomy procedures contrary to the traditional surgical methods adopted by various surgeons. This method can be applied as primary surgical therapy in cases of large pseudocysts of the pancreas.

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#### Informed Consent

Informed Consent was obtained from the patient.

#### Author's contribution

All the authors contributed equally to the case report.

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**Conflict of interest**

The authors declare that there is no conflict of interests.

**Data and materials availability**

All data sets collected during this study are available upon reasonable request from the corresponding author.

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